

AMENDMENTS TO THE CLAIMS

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1. (Currently Amended) A method for managing access to a logical I/O device, said method comprising:

communicatively coupling first and second nodes, having respective first and second bus controllers having respective first and second reservation tables, and said logical I/O device, by means of a bus and said first and second bus controllers;

receiving on said first controller a request to reserve said logical I/O device;

updating the first reservation table to reflect reservation of the logical I/O device; and

communicating by means of said bus from said first to said second controller a reservation request for said logical I/O device for ~~execution~~ updating by said second controller of said second reservation table, in response to said receiving.

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2. (Previously Presented) The method of claim 1, further comprising the step of:
reserving said logical I/O device for said first node within said second controller, in response to said communicated reservation request.

3. (Previously Presented) The method of claim 2, wherein said step of reserving further comprises:

determining whether said logical I/O device is already reserved within said second controller;

communicating a response, indicating failure to reserve said logical I/O device, to said first node when said logical I/O device is already reserved; and

otherwise, reserving said logical I/O device for said first node within said second controller, and communicating to said first node a response indicating success in reserving said logical I/O device.

4. (Previously Presented) The method of claim 3, further comprising the steps of:
receiving said response to said communicated reservation request;
aborting the method for managing access when said response indicates failure to reserve and said first controller is subordinate to said second controller;

otherwise, delaying and communicating again a reservation request for said logical I/O device when said response indicates failure to reserve and said first controller is dominant to said second controller; and

otherwise, responding, indicating success, to said received reservation request.

5. (Previously Presented) The method of claim 1, wherein said step of communicatively coupling further comprises:

communicatively coupling said first and second nodes and said logical I/O device depending from a multi-logical-device, third controller by means of said bus and said first and second controllers.

6. (Original) The method of claim 1, wherein after said step of receiving and before said step of communicating, the following steps are performed:

in response to said reservation request, determining whether said logical I/O device is already reserved within said first controller, and aborting said method for managing access when said logical I/O device is already reserved; and

otherwise, reserving said logical I/O device for said first node within said first controller.

7. (Currently Amended) A computer-readable medium for data storage wherein is located a computer program including instructions for causing a first node in a computer system, having a first bus controller having a first reservation table, to manage access to a logical I/O device in said computer system by:

receiving on said first controller a request to reserve said logical I/O device;

updating the first reservation table to reflect reservation of the logical I/O device and

communicating in response to receiving said request, a reservation request for said logical I/O device from said first controller to a second controller of a second node for execution—updating of a second reservation table by said second controller.

8. (Previously Presented) The computer-readable medium of claim 7, wherein said computer program further including instructions causing access management by:

reserving said logical I/O device for said first node within said second controller, in response to said reservation request communication.

9. (Previously Presented) The computer-readable medium of claim 8, wherein said computer program instructions causing said reserving further comprise instructions for:

determining whether said logical I/O device is already reserved within said second controller;

communicating a response, indicating failure to reserve said logical I/O device, to said first node when said logical I/O device is already reserved; and

otherwise, reserving said logical I/O device for said first node within said second controller, and otherwise, reserving said logical I/O device for said first node within said second controller, and communicating to said first node a response indicating success in reserving said logical I/O device.

10. (Previously Presented) The computer-readable medium of claim 7, wherein after said receiving and before said communicating, said computer program further including instructions for:

determining, in response to said reservation request, whether said logical I/O device is already reserved within said first controller, and aborting said method for managing access when said logical I/O device is already reserved; and

otherwise, reserving said logical I/O device for said first node within said first controller.

11. (Currently Amended) A computer system comprising:

at least one logical I/O device;

first and second nodes having respective first and second bus controllers having respective first and second reservation tables, said first controller comprising:

a computer-readable medium storing a computer program for managing access to said logical I/O device by a first node in said computer system, said computer program including instructions for: receiving on said first controller a request to reserve said logical I/O device; updating the first reservation table to reflect reservation of the logical I/O device; and communicating in response to receiving said request, a reservation request for said logical I/O device from said first controller to a second controller of a second node for ~~execution~~ updating of the second reservation table by said second controller;

a CPU, coupled to said computer-readable medium, for executing said computer program stored in said medium; and

a bus communicatively coupling said first and second nodes and said logical I/O device by means of said first and second controllers.

12. (Currently Amended) A method for managing access to a logical I/O device, said method comprising:

communicatively coupling first and second nodes having respective first and second bus controllers having respective first and second reservation tables, and said logical I/O device, by means of a bus and said first and second controllers;

receiving, on said first controller, a request to release said logical I/O device;

updating the first reservation table to reflect release of the logical I/O device; and

communicating a release request for said logical I/O device over said bus from said first controller to said second controller for ~~execution~~ updating of a second reservation table by said second controller, in response to said receipt of said request to release.

13. (Original) The method of claim 12, wherein before said step of receiving, the following steps are performed:

receiving on said first controller a request to reserve said logical I/O device; and

communicating by means of said bus from said first to said second controller a reservation request for said logical I/O device for execution by said second controller, in response to said receiving a reservation request.

14. (Previously Presented) The method of claim 12, further comprising the step of:

releasing said logical I/O device within said second controller, in response to said release request communication.

15. (Previously Presented) The method of claim 12, wherein said step of communicatively coupling comprises:

communicatively coupling said first and second nodes and a logical device depending from a multi-logical-device, third controller by means of said bus and said first and second controllers.

16. (Currently Amended) A computer-readable medium for data storage wherein is located a computer program for causing a first node in a computer system, having a first bus controller having a first reservation table, to manage access to a logical I/O device in said computer system by:

receiving on said first controller a request to release said logical I/O device;

updating the first reservation table to reflect release of the logical I/O device; and

communicating by means of a bus from said first controller to a second controller of a second node a release request for said logical I/O device for execution updating of a second reservation table by said second controller, in response to said receiving.

17. (Previously Presented) The computer-readable medium of claim 16, wherein said computer program further manages access by:

releasing said logical I/O device within said second controller, in response to said release request communication.

18. (Previously Presented) A computer system comprising:
first and second nodes having respective first and second bus controllers, said first controller comprising

the computer-readable medium of claim 16; and

a CPU, coupled to said medium, for executing said computer program in said medium;

a logical I/O device; and

a bus communicatively coupling said first and second nodes and said logical I/O device by means of said first and second controllers.

19. (Currently Amended) An apparatus for managing access to a logical I/O device, said apparatus comprising:

means for communicatively coupling first and second nodes, having respective first and second bus controllers having respective first and second reservation tables, and a logical I/O device;

means for receiving on said first controller a request to reserve said logical I/O device;

means for updating the first reservation table to reflect reservation of the logical I/O device; and

means for communicating from said first to said second controller a reservation request for said logical I/O device for ~~execution~~ updating of said second reservation table by said second controller, in response to said receiving.

20. (Currently Amended) An apparatus for managing access to a logical I/O device, said apparatus comprising:

means for communicatively coupling first and second nodes, having respective first and second bus controllers having respective first and second reservation tables, and a logical I/O device;

means for receiving on said first controller a request to release said logical I/O device;

means for updating the first reservation table to reflect release of the logical I/O device and

means for communicating by means of said bus from said first to said second controller a release request for said logical I/O device for ~~execution~~ updating of said second reservation table by said second controller, in response to said receiving.

21. (Currently Amended) An apparatus for managing access to a logical input/output device, said apparatus comprising:

a communications link coupling first and second nodes each having respective first and second bus controllers to the logical input/output device;

first and second reservation tables accessible to the first and second bus controllers, respectively;

input logic on said first controller receiving a request to reserve the logical input/output device and updating the first reservation table accordingly; and

communications logic communicating from said first controller to said second controller a reservation request for the logical input/output device for ~~execution~~ updating of the second reservation table by said second controller, in response to said receiving.

22. (Previously Presented) The apparatus in claim 21, wherein the logical input/output device is selected from a plurality of logical input/output devices coupled with a physical input/output device.

23. (Original) The apparatus in claim 21, wherein said communications link comprises a bus.

24. (Previously Presented) The method of claim 1, wherein said communicatively coupling further comprises said logical I/O device is stored on a plurality of physical I/O devices.

25. (Previously Presented) The method of claim 1, wherein said communicatively coupling further comprises said logical I/O device is selected from a plurality of logical I/O devices, with each logical I/O device defined in part on a common physical I/O device.

26. (Previously Presented) The system of claim 11, wherein said logical I/O device spans a plurality of physical I/O devices, and said reservation request reserves said logical I/O device without reserving each of said plurality of physical I/O devices.

27. (Cancelled).

28. (New) The method of claim 1, wherein the first and second reservation tables each cross-reference logical devices with a reserving SCSI device.

29. (New) The method of claim 1, further comprising:
receiving successful communication from said second controller; and
completing the reservation command to an operating system after receiving said successful communication.